

August 10, 2004
15621 SE 26th Street
Bellevue, WA 98008

Dear Friends:

It has been over a year since I have issued a Keyletter, and I have received several enquiries asking when this issue would be published. I publish a Keyletter when I get enough solid content to make up an issue, so the frequency of the issues is really up to you, the readers! If you have material to submit I would prefer that it be sent as an email or an email attachment. This makes it easy to import into the master document. I can handle any common word processing format.

VE3FRX, SK. Murray Willer passed away on May 28, 2004 shortly after his 91st birthday after being ill for some time according to his daughter in law. I have no other information. Murray was a real gentleman, and I enjoyed his friendship over several years of correspondence. He was always ready to help out new collectors and I learned a lot from him. Murray was well known for coordinating the telegraph presentations at AWA for many years. In his later years he became interested in light signaling devices and amassed an impressive collection.

Tom O'Connor, NI8G, SK. Tom O'Connor died on July 15, 2004 of pancreatic and liver cancer at age 59. He was a well known at AWA as a key and boat anchor collector. Tom was originally licensed in 1958 as K8MMR and lived in Milan, OH (birthplace of Thomas Alva Edison) his entire life. Professionally he was a welder, but was also a skilled radio technician and antenna expert. In fact, he was a "jack of all trades" who seemed to have a solution for any problem that he encountered.

Morsum Magnificat Closed. Zyg Nilski, G3OKD, has closed MM with issue 89. Back issues, specialist books and MM binders (designed to hold 12 issues per binder) will be for sale while stocks last. For further information or updates, see the MM website at: <http://www.morsum.demon.co.uk/>

Finger Keying. I am working on a history of finger keying for an upcoming Keyletter. If you have a finger key or any information about them, please send it to me. The definition of "finger keying" is a little loose, but for now it includes any key or device where two keys or buttons are pushed vertically to generate Morse code. This would include the Quik-Key, the Kitanos, the Dunduplexes with the push buttons, etc,

Milestone Acquires AMECO. (Press release dated July 6, 2004) Milestone Technologies, Inc., has acquired the assets of AMECO Corporation, one of the oldest names in Amateur Radio. Company president Marshall Emm, N1FN, says that the acquisition fits neatly with Milestone's existing divisions Morse Express (telegraph keys and related equipment) and Oak Hills Research (QRP kits).

AMECO was started shortly after World War II and at one time was the nation's leading seller of Morse code training equipment including inexpensive telegraph keys, code practice oscillators, and HF pre-amplifiers. Milestone has begun production of several AMECO products that had been off the market for some time, and plans to update the product line to reflect current technology. AMECO products are available from most amateur radio stores, and direct from Milestone's web site at

www.MorseX.com where you will also find secure ordering facilities. Call (800)238-8205 toll free to order by phone, or (303)752-3382 for more information. The acquisition coincides with Milestone's move into new premises, with a retail showroom and enhanced production facilities.

Spark Equipment List. Russ Kleinman, WA5Y, has embarked on an ambitious project - the cataloging of all commercially marketed spark components and transmitters! This includes military spark sets. This information will complement the Spark Key Project and give a better perspective on the technology. Russ has three web pages at:

Spark Key Project <http://www.zianet.com/sparks/sparkmakers2.html>

Spark Transmitter Project <http://www.zianet.com/sparks/transmitters.html>

Spark Component Page <http://www.zianet.com/sparks/components.html>

Vintage Bug Net. The Vintage Bug Net, hosted by Shelby, AD4WQ, meets every Wednesday night at 8:30 CST on 3.570. As soon as that portion of the net is over, it moves to 40 Meters on 7.070 for the second meeting of the night. Some check in on 80M and some on 40M. Those checking into the net are asked to do four things:

1. Give their Call
2. Give their name
3. Give their QTH
4. Give the type vintage bug they are using (most important)

Activating an old sounder. These comments are independent of the coil resistance. I suggest starting by verifying that the coils show continuity and that they are hooked up in series. The armature should then be verified as swinging freely up and down and the spring adjusted so that a light force will be necessary to pull it down to the coils.

The coil-to-armature plate distance should be adjusted to almost touching on pull-in and about 1/32-inch on release. Note that if the plate actually touches the pole pieces of the coils, it is possible to get a magnetic lock-in which prevents the spring from being able to pull the armature back up. You must be able to see some light or pass a thin piece of paper between the plate and the pole pieces. I recommend starting with a very low voltage like 1.5 volts and gradually increasing the voltage until a reliable pull-in is achieved. I recommend using the minimum voltage that will produce reliable pull-in so as to reduce or eliminate heating of the coils and the consequent risk of damaging the insulation. *Tom Perera, W1TP.*

Bencher RJ-1 and RJ-2 springs. Bencher just has received replacement springs for their RJ-1 and RJ-2 straight keys. They previously had a spring that was about as stiff as a bedspring that no amount of adjustment would slacken. You had to hit the lever with a hammer to depress it. Now, with the new spring, my RJ-2 is as sweet a key as any I own. *David Ballentine, KK4DW.*

Pinstriping. Look, this is TOP secret. Don't let it out. You take a piece of cellophane tape, I call it, Scotch tape, that's 'cause I am cheap or poor or both. You stretch it along the key. You measure it from the edge at both ends to make sure it is straight, half inch is good.

Pay attention, this is the tough part. You take ANOTHER piece of tape and stretch it parallel to the first, but a 1/16 away. You can lift it and put it back all along the way until you can see that it is really parallel all the way along. With a paper towel between your finger and the base of the key (so you won't put finger oil on the part of the key where you are going to paint) press the tape down well so the paint won't leak under it.

You don't need a steady hand or guide or anything else, just slop the paint pen on the exposed line between the tape. DON'T let the paint dry, rip the tape off right away. If you let it dry, the paint on the key will adhere to the paint on the tape and pull it off the base of the key. Rip that tape off, viola, perfect line, straight and crisp.

Now the filigree, I could tell you, but then I would have to rub you out. *Fred Maas, KT5X.*

Electric Specialty Mfg. Co. Bugs. I believe there are 4 variations to CR bugs by Electric Specialty Mfg Co.

- 1) The first model had a cast base, cast damper support and a long straight circuit closer on the right side.
- 2) The second model had a cast base, a stamped damper support, and a right-angle circuit closer under the paddle. It also had an extension arm for the pendulum to slow it 'way down' though these slipped on and off and are seldom seen.
- 3) The third had no circuit closer, and was the so-called "radio bug" which was available assembled or in kit form.
- 4) Last were new-old-stock bugs similar to the second model but on 3/8 steel bases made from parts by Jim Hess (primarily) and some by me.

There was also a very early paddle from bug parts (like a Vibrokeyer) some by Electric Specialty and some by Jim and me. I have now used up all the bases for both bugs and paddles. I might mention that the CR paddles (originally called Ham-Keys but not connected with the St. Louis people) were probably one of the very (the??) first commercial paddles, while other evil people were cutting up perfectly good bugs to make paddles.

Electric Electric Specialty Mfg Co is now a general machine shop making various components for other companies, not necessarily involving electricity. They have moved from Cedar Rapids about 5 miles east to Marion, Iowa. The current owner is Greg Wilson, of the original Wilson family who made the bugs and paddles. They also made other items besides keys. I have a "Tel-Ohm" VOM , plus the box, made by them for the telephone industry.

There is no connection with Electric Specialty Mfg Co. and Electro-Bugs. There was some confusion caused by a typist error in re-copying the Bug Check List into Tom Perera's Collectors' Guide which combined two lines and put the two names together. The Vail Correspondent #14, page 8 is correct. *Doug Seneker, N0WAN.*

Diaphragm Keys. As you know, there is a rare type of spark key which I call a diaphragm key. Diaphragm keys have the contacts sheltered underneath a flameproof material in an airtight compartment. They are a bit like an oil break key without the oil and with a firmly seated cover. The Emil J. Simon CE693 1/2 KW aircraft key is the more straightforward way of making such a key. One binding post on the CE693 connects to the lever via the current strap, and the other connects to the bottom contact in the airtight compartment. The diaphragm on the Simon key is nonconducting.

The Wireless Specialty Apparatus Company also made a diaphragm key, called the CR675, rated at 5 amps and 250 V. Both the CE693 and the CR675 were made in 1917. The WSA CR675 has an interesting wiring scheme, with the same idea as one of the General Radio spark keys (not a diaphragm key, though). The current does not enter the lever at all, a way of protecting the operator from a dangerous shock. The only function of the lever is to carry the upper contact from which it is insulated with a sleeve. The diaphragm connects between the upper contact and the lever and the diaphragm is made of very thin sheet copper. The current goes from one binding post to the outside well of the compartment which is in contact with the diaphragm circumferentially. The current then travels through the diaphragm itself to the upper contact but never to the lever itself. Contact is made when the lever is pushed down, carrying the upper contact down onto the lower one and completing the circuit.

The interesting differences between these two keys is best demonstrated by looking carefully at them, and it is a bit hard to describe in words. But it comes as a surprise when one looks at the wiring underneath the WSA key and it is obvious that the lever is not part of the circuit! Thanks to Tim Soxman who helped me work this all out. *Russ Klienman WA5Y*

WWII U.S. Navy shipboard operations. Ed Biter, NS3E, contributed the following reminiscences from Ben Smith, W4SKY:

Thought you guys would like to hear the reflections of a good friend of mine and WW2 Navy Op. He is 83 years old, but can still work CW with the best of them. He paints a rather dull picture of naval CW in the Pacific during the war, and I don't think it was limited to his specific area. I quote his e-mail to me.

“Most operators operated in that range of 15 to 20 WPM. One heard only a few ops sending at 30 WPM or higher using a bug. There are a few guys left that can send at forty WPM with a bug. Most of them are dead.

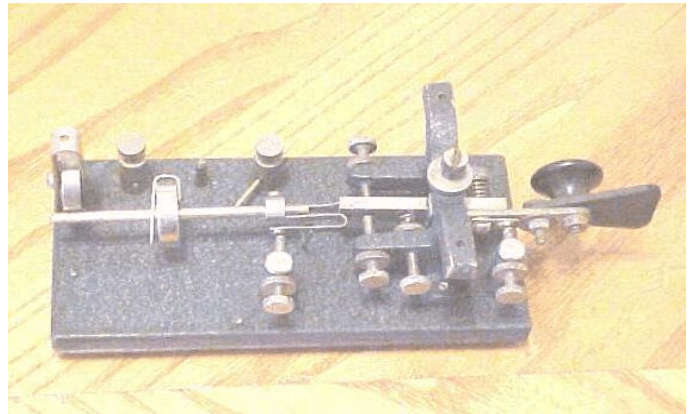
There were dammed few WWII Navy ops that could copy over 25 WPM. Those that could were in the shore stations and communications ships. High speed circuits were few. The greater number of shipboard operators copied "FOX" (receive only) at 17 to 22 WPM. Once in a great while speeds would go to 27 WPM out of Guam (NPG). The other radiomen on my ship couldn't copy it.

There were a few bugs on the larger ships, and they connected to the straight key with the wedge connector. It went between the lever switch and the straight key base. I will wager that 90% of Navy Operators in WW11 never broke radio silence, and never sent a single character aboard ship during war time. I broke radio silence once in two years in the South Pacific. They could have

thrown 90% of the keys away. They were never used. Even "in port" radio silence was observed. The signalmen used a key to key the "Truck Lights". These were two red lights mounted at opposite sides on the highest yardarm and were used to communicate with other ships and shore stations in port. They used a key more than the radio ops.

Using a straight key over long periods of time used to cause "glass arm" (carpal syndrome). The side-winder and bug relieved that. It was easy to determine if the other guy was using a side winder, Spacing would almost disappear. Old time bug ops would develop a rhythm by varying the length of their dashes. This was "the Lake Erie Swing". We used to be able to identify other ops and other stations by keying characteristics.

Wilson Bug Review. Recently an old Canadian friend decided that I should have one of the Wilson bugs, which were made in Toronto in the 1940s. They were originally designed for the RCAF in WWII, but were also available for a time after the war as the Model SA-100. The nameplate has been removed from my key, but I have seen plates that show both the military nomenclature and SA-100 designations. They are really good looking keys, with a blue base, 3 by 6 1/8 inches, and an elegant rounded T bar frame.



The first thing I do with newly arriving keys is to hook them up and make a contact or two. I must have a Canadian clone of me somewhere, as the bug was adjusted just right! As you may know, the bug can easily be converted to a lefty by turning it upside down. Rubber bumpers screw into one threaded hole on the damper support and two holes on the frame. One of the four bugs I am aware of still has those bumpers in place. I did turn my bug upside down, and it functions quite well as a "lefty". My bug has one of the Speed X type friction weights and a bulls eye thumb piece, which are common on some of the older Speed X bugs. My initial thought was that these must be replacement parts, but they are apparently original equipment. I checked with 3 other Wilson owners, and they have the same weights and thumb piece on their bugs.



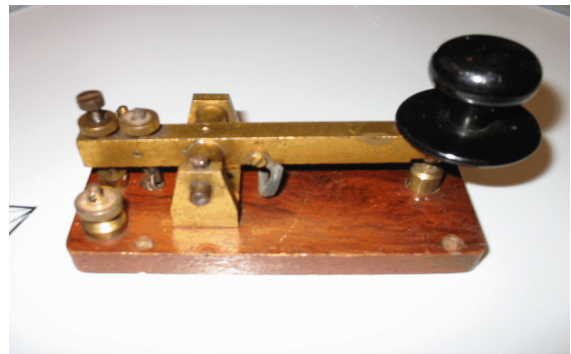
Another interesting feature on the bug is the "dot stabilizer", a little U shaped wire on the dot spring. This is reminiscent of some of the McElroy bugs from the 1930s. Three of the bugs I am aware of have this stabilizer, and it is missing from the fourth. The bug also has a vertical pin on the base for storing an extra weight, when not being used. I find that one weight suffices just fine at lower speeds. There is no circuit closer on the bug, so it was designed for radio use.

As they say, "the proof is in the pudding". After several long sessions with the Wilson, I find it is very easy to use and a great deal of fun. The designer apparently knew what was needed for the RCAF, and did a great job of providing a quality machine. You get shades of Speed X, McElroy, and Wilson engineering all at the same time. **Don Karvonen K8MFO**

RCAF 10A/556. This key is probably the descendant of the Air Ministry 10F/2533. One is plated for use in warmer climes and the other is brass. Note the spring hooks are exactly the same as the Canadian. The Canadian knob is different and most of the Canadian ones I've seen and had have been on some composition type of base. The third picture is of an exact key advertised as WW I surplus (see inside back cover of MM 46) as RAAF no 1 No. 51KBS, This last key has an extra contact, extra terminals and a bulb fitted in a socket. This could have been used for teaching or like the American J -7A for the operator to see what he was sending over the aircraft noise - who knows??



All the keys are nearly the same construction. The contacts are not very big for spark work and you only have the thumb guard to protect you from receiving a wallop! I have also seen one of these keys with a round ivory makers disc sunk into the base with the name A.W. Mason, Surrey. There is no ID on the key with the bulb fitted.



Most British land line keys had their bottom screws sealed with wax. One of the reasons I was told, was to prevent verdigris developing on the brass thus making the screws difficult to open when required. The wax kept the air off the screws ,also used to prevent the screws working loose with constant use. **Wyn Davies.**



Morsecode bits and pieces.

Daguerreotype. Did you know that the great civil war photographer Mathew Brady learned the process of daguerreotype from Samuel Morse? **Neal McEwen, K5RW.**

Massie Keys. On pages 23 and 24 of the AWA Review of 2001, I discussed the Massie slate based key, shown in the article in Figure 33. I ended that discussion by stating that the key was a bit of an enigma, as it showed up in 1916 in the Sears Catalog as the "Commercial Wireless Key." Until now, the Massie Key and the Sears Commercial Wireless Key, made after Massie was absorbed by Marconi, were assumed to be identical-- but it isn't so! It appears that the original Massie version can be distinguished from the version sold later by Sears. The knurling on the hardware is more plain and looks cheaper on the Sears model, which also lacks the base plates protecting the slate

underneath the lever travel adjustment screw and the spring. The original spring on the Massie was conical; it was the same diameter up and down the spring on the Sears model. These differences can be made out (with difficulty) when comparing the Sears catalog with the picture on page 35 of Massie and Underhill's "Wireless Telegraphy and Telephony", published in 1908. The differences are much more apparent with the two models in front of you, and they match the differences seen between the catalog and the book. It is still unclear whether the Sears version was made by Massie or not, whether the design was bought by Sears and made by another contractor, or whether another manufacturer simply started making a copy of the key after the original company was no longer around to care. **Russ Kleinman, WA5Y.**

Camera Light Box. Before everybody had digital cameras and the net, I used to run "keys wanted" ads in QST and other places, and people would send me pictures of their keys in the mail. The pictures were just like what you see on eBay -- a mix of blurry crap and so-so stuff. One day I got a picture that blew me away. The key was just a plain ordinary Champion, but the picture was fantastic. So I talked to the owner and it turned out she was a product photographer, and she used some fancy lights and something called a "soft box". Since then I've been trying to take pictures as good as the ones she sent. I built a soft box out of a cardboard box and some translucent plastic, and it did OK, but still not the same. Then I saw something called an EZ Cube on eBay (search for "ezcube"). The EZ Cube is a collapsible soft box made out of nylon fabric and spring wire, and the results are fantastic. I use some low-voltage track lights I installed over the washer and dryer but most any good lights would work fine. A digital camera with manual white balance is a must to get the color right, but the EZ Cube does a beautiful job of dispersing the light, and lets in a lot more light than my home brew version. I got the smaller 20"x20" version which is plenty big enough for keys -- see her eBay Store for those. Another vendor sells a similar product called a "light cube" on eBay for a little less. If you want to really go professional the seller of the EZ Cube sells a set of lights and stands. The results are amazing, and when you're all done it collapses into a small package. **Randy Cole, KN6W.**

Lytle Triplex Census. Tim Patton provided the following information:

Serial Number	Owner
1019	Tim Patton
1029	Doug Palmer
1069	Russ Kleinman
1039	Neal McEwen
1064	
10xx	Vince Thompson
1044	Gil Schehman
1049	Gil Schlehman.
10xx	Tom Perera
10xx	Unknown
1007	Roger Reinke
1012	Roger Reinke
1017	Mike Schultz
10xx	Unknown sighting
1009	Tony Rogozinski
Unknown	AWA
Unknown	AWA

Pocket Sets. I was perusing my reprint of Prescott's History, Theory, and Practice of the Electric Telegraph, when I came upon a very interesting paragraph on page 283 about locating problems in the line: "..... A pocket magnet is a very convenient instrument for the purpose of testing upon a line, as you can converse with the operators, when necessary, with the greatest ease. We have never had any difficulty, however, in conversing by means of shocks through the fingers or tongue, without any apparatus." I guess REAL men didn't use pocket sets?? **Russ Kleinman, WA5Y.**

Paruscio Jiggers. L. A. Paruscio was a Telegraphist in Melbourne and made jiggers that were very similar to 1960's vintage Vibroplex Originals. They were extremely well made. It is thought he made a total of 13 of them. For serial numbers he punched small round indents into the underside of the base. One indent is serial number 1, five indents is serial number 5, etc. They did not have name plates, but he inscribed his name and "Telegraphist C.T.O. Melbourne" on the top of the base.
Ron McMullen.

Australian Vaile Autoplex. The Vaile Autoplex was made by John (known all his life as Jock) Vaile. Jock was a fitter and turner and an amateur radio operator. The Autoplex was aimed at radio operators and never intended for land line use. Jock just wanted to make his own jigger and developed the Autoplex after radio friends expressed an interest in them.

He lived at Leslie Court, Burwood Victoria and had a workshop at home from where he did all his work.

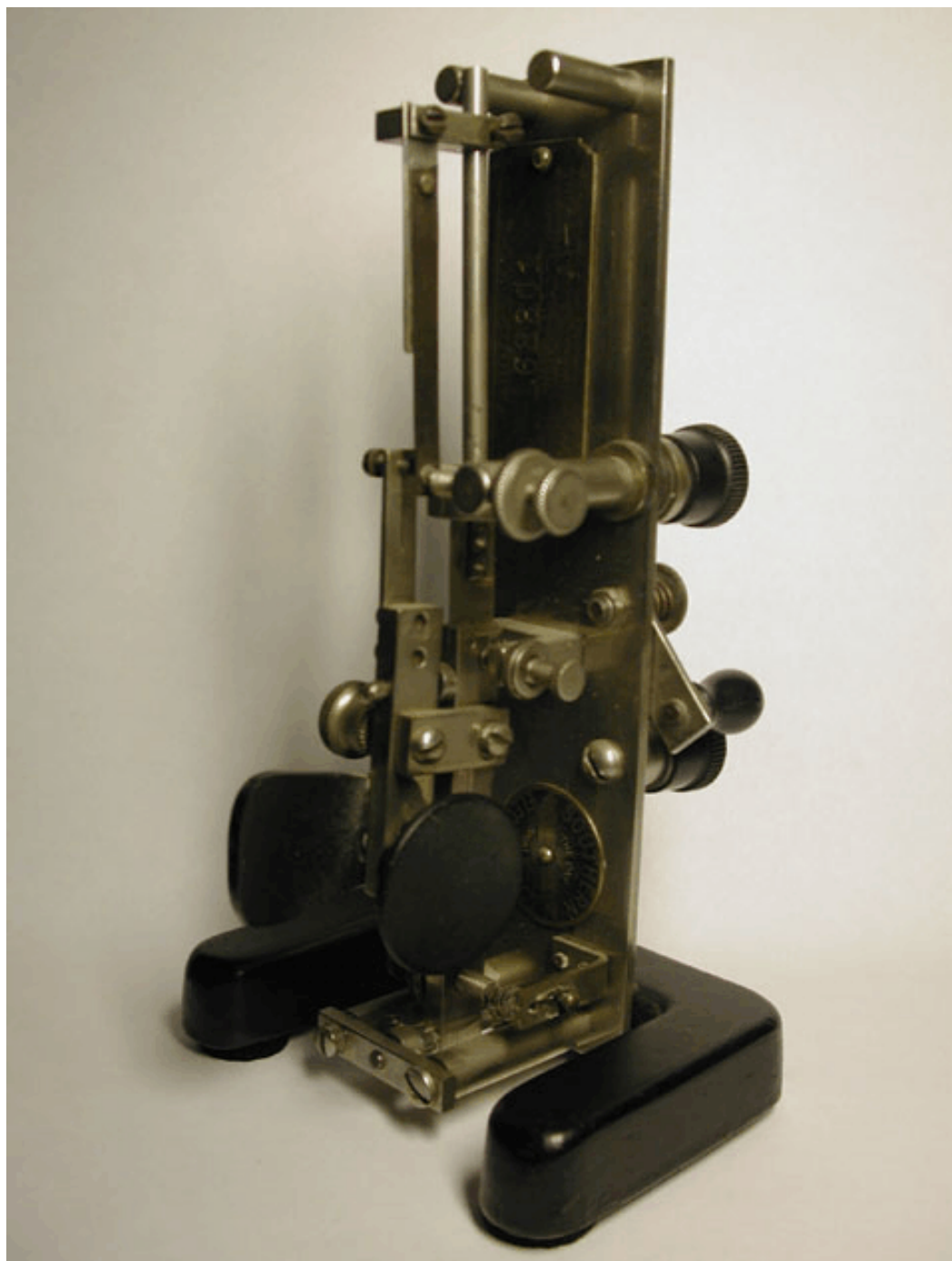
His son told me that as far as he could recall they were made in the 1950s and ceased in early 1960s with 50 to 100 being made. He doubts if there were ever any drawings etc. as he said his father was a person who kept everything in his head and worked mainly by trial and error to come up with the desired result. Many Autoplexes went to the Victorian Police Force and other radio operators. He can remember them often being returned to his father for replacement of points which would suggest high currents in use. He recalls on at least one occasion he accompanied his father to a US naval ship in Melbourne to deliver an Autoplex and was given a tour of the ship. He is pretty sure that others were sold to various ships in port. This may be how one turned up in San Francisco.



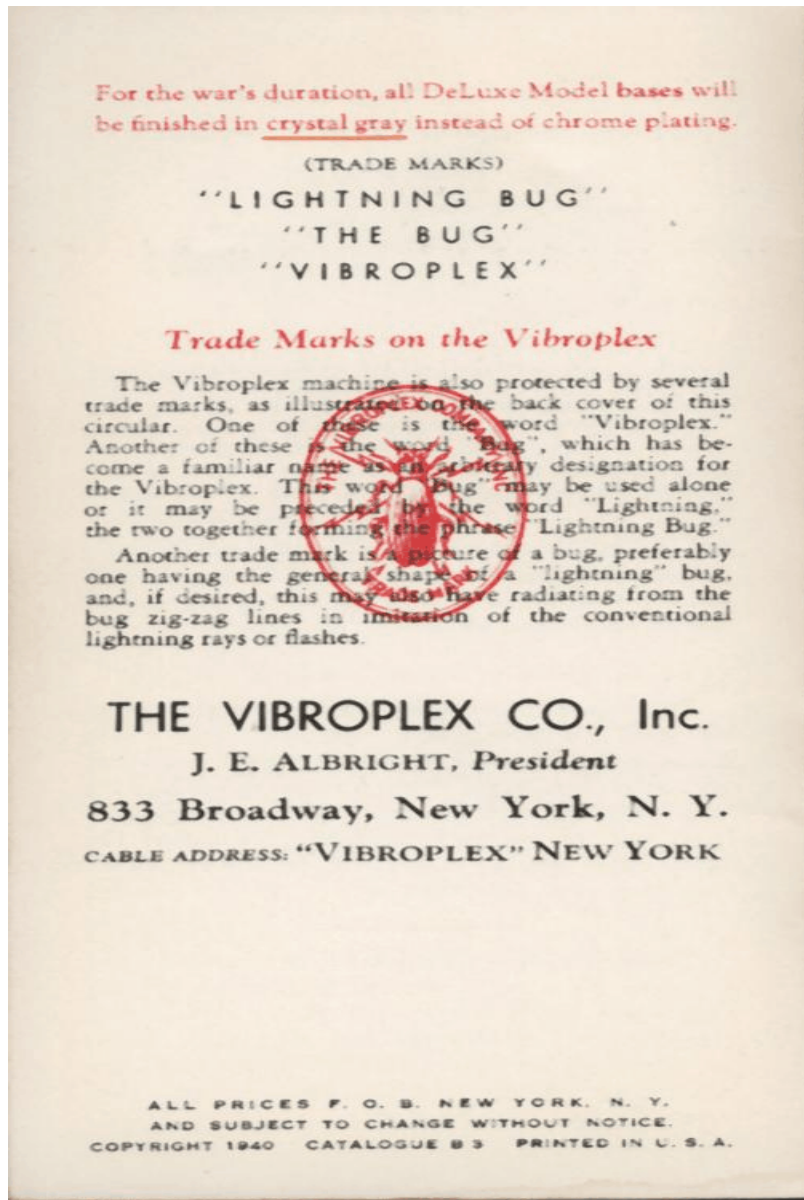
As I've said before history on these things here is practically non existent. A lot were like to Autoplex, only made in very small numbers by peopled just trying to develop something for themselves. This may not be much help, but at least its something. Vaile's son tells me there is nothing left other than the Autoplex his father used which he has kept. There used to be sales brochures, a few spare parts etc. but all were tossed out in the years after Jock's death about 10 years go. **Ron McMullen.**

Readers: Please read Morsum Magnificat number 89, March 2004 for Ron's excellent article on Australian Telegraph Keys and Instruments.

Vibroplex Upright Third Model. Martin Oderbach and Tim Soxman provided this photo of a third variation of the Vibroplex Upright. Per Martin, the third model is like a marriage between a Midget (base) and a late Model X (round shaft), Randy thinks they were built on special order only. The serial number is in the Midget ranges - so the base could have been a Midget (at least a planned one).



Vibroplex Battleship Gray. Almost everything I've ever read calls the base color of a WW2 deluxe Vibroplex Battleship Gray. This is the last page of an eight page add inserted into a 1945 revised Phillips Code book - Vibroplex called it "Crystal Gray". **Bob N0UF**



Well, that is it for #37. Again, I only publish when I have solid content, so please keep those cards, letters and emails coming! With the demise of Morsum Magnificat the Keyletter is the only horse left in town, and I'd like to keep it alive. I invite those that contributed to MM and The Vail Correspondent to contribute to the Keyletter. I intend to continue publishing the Keyletter indefinitely, but can only do so with the help of the collecting community.